

# eco-towns

Sustainability Appraisal and Habitats Regulations  
Assessment of the Eco-towns Programme

## North East Elsenham







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Prepared by Scott Wilson for Communities and Local Government

## North East Elsenham

November 2008

Scott Wilson Ltd

Department for Communities and Local Government

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## The structure of the eco-towns SA/HRA publications

The Sustainability Appraisal (SA) and Habitats Regulations Assessment (HRA) of the draft Eco-towns Planning Policy Statement and Programme have been prepared by Scott Wilson Ltd for Communities and Local Government.

As the SA and HRA has been undertaken at a strategic level, it is necessarily broad in its assessment, conclusions, and recommendations. It takes a 'snapshot' of locations and proposals in September 2008, recognising that the proposals are continuing to be developed, and constitutes the first of a series of successive assessments that will be required as eco-town proposals are taken forward. Planning applications for eco-towns will also need to include a detailed Environmental Impact Assessment (EIA) and possibly HRA which may, in turn, also identify mitigation measures.

### The SA and HRA should be read in four parts and an Annex:

- I) **The SA of the draft Eco-towns PPS**
- II) **The SA/HRA of the Programme – Introduction**
- III) **The SA/HRA of the Programme – Locational chapters**
  - Pennbury
  - Middle Quinton
  - Whitehill-Bordon
  - Weston Otmoor and Cherwell
  - Ford
  - St Austell (China Clay Community)
  - Rossington
  - Hanley Grange and Cambridgeshire
  - Marston
  - North East Elsenham
  - Rushcliffe
  - Greater Norwich
  - Curborough
  - Manby
  - Leeds City Region
- IV) **The SA/HRA of the Programme – Conclusions**

### Annex: Profile of European Sites

The sections above are accompanied by a Non-Technical Summary which summarises the findings of the SA and HRA of the draft Eco-towns PPS and Programme.

All documents are available on the Communities and Local Government website at [www.communities.gov.uk/ecotowns](http://www.communities.gov.uk/ecotowns)

If you have comments on issues raised in the SA or HRA please respond as part of the consultation on the PPS, details of which are set out at [www.communities.gov.uk/ecotowns](http://www.communities.gov.uk/ecotowns). If you would like further information on any of the above please contact the Eco-Towns Team at Zone 2/G9, Eland House, London, SW1E 5DU or by email to: [ecotowns@communities.gsi.gov.uk](mailto:ecotowns@communities.gsi.gov.uk)

# 1 Introduction

## 1.1 This chapter

- 1.1.1 This chapter sets out the draft Sustainability Appraisal and Habitats Regulations Assessment of the shortlisted eco-town location and associated development proposal at **North East Elsenham**.
- 1.1.2 As this Sustainability Appraisal and HRA has been undertaken at a strategic level, it is therefore necessarily broad in its assessment, conclusions, and recommendations. It takes a 'snapshot' of locations and proposals in September 2008 recognising that the proposals are continuing to be developed, and constitutes the first of a series of successive assessments that will be required as eco-town proposals are taken forward. Planning applications for eco-towns will also need to include a detailed Environmental Impact Assessment (EIA) and possibly HRA which may, in turn, also identify mitigation measures.

## 1.2 Eco-towns Planning Policy Statement

- 1.2.1 Communities and Local Government has published for consultation a Draft **Eco-towns Planning Policy Statement (PPS)**, accompanied by a Sustainability Appraisal and Habitats Regulations Assessment. According to the Draft PPS, eco-towns are new settlements which *"will have sustainability standards significantly above equivalent levels of development in existing towns and cities"*<sup>1</sup>. The eco-towns concept is designed to assist in meeting the twin challenges of providing additional housing and mitigating and adapting to climate change. The aim of the Draft PPS is to promote the development of *"exemplar projects that encourage and enable residents to live within environmental limits"* and *"provide a showcase for sustainable living and allow government, business and communities to work together to develop greener, low carbon living"* thus providing inspiration for future development. With this in mind, the Draft PPS sets out a range of minimum standards which will be used to define an 'eco-town'. These cover a wide range of sustainability issues including biodiversity; climate change adaptation; employment; flood risk management; green infrastructure; homes; local services; transport; waste; water; and zero carbon.

## 1.3 Eco-towns Programme

- 1.3.1 The **Eco-towns Programme** has been developed with the aim of getting exemplar eco-towns off the ground with development underway by 2016.

<sup>1</sup> Communities and Local Government (2008). *Planning Policy Statement: Eco-Towns – Consultation document*

The Government has short listed a series of potential eco-town locations<sup>2</sup> – of which **North East Elsenham** is one – following an initial call for proposals. Each location has been subject to a Sustainability Appraisal and Habitats Regulations Assessment to assess its suitability for an eco-town. The findings of the appraisal for North East Elsenham – are documented in this report. In a parallel exercise, the Government is deciding which of the schemes related to the short listed locations will get backing or financial support from Government through funding of associated infrastructure or partner public bodies.

## 1.4 SA and HRA

**1.4.1 Sustainability Appraisal (SA)** is generally not undertaken at the national level. In developing the Eco-towns PPS and the Eco-towns Programme, Communities has decided to undertake SA, incorporating the requirements of the European Strategic Environmental Assessment Directive<sup>3</sup>, at a level proportionate to the PPS and the Programme. Scott Wilson was commissioned to undertake the SA as well as a **Habitats Regulations Assessment (HRA)** of the Draft Eco-towns PPS and the Eco-towns Programme. SA seeks to identify and evaluate the impacts of a proposal on the economy, the community and the environment – the three dimensions of sustainable development – and suggest measures for improving the proposal’s sustainability performance. HRA tests the impacts of a proposal on nature conservation sites of European importance – Special Areas of Conservation and Special Protection Areas, and, as a matter of Government policy, Ramsar sites – and is also a requirement under EU legislation<sup>4</sup>. An accompanying report sets out the SA and HRA of the Draft Eco-towns PPS.

## 1.5 SA methodology

**1.5.1** Part I of this report describes the SA methodology in full. The SA for each of the shortlisted locations and any reasonable alternatives is based on a series of questions:

- what’s the objective of the proposal?
- what’s the policy context?
- what are the key sustainability objectives we need to consider?
- what’s the situation now? (including any existing problems)

<sup>2</sup> Communities and Local Government (2008). *Eco-towns: Living a greener future* [online] available at: [www.communities.gov.uk/publications/housing/ecotownsgreenerfuture](http://www.communities.gov.uk/publications/housing/ecotownsgreenerfuture) (accessed 4 July 2008)

<sup>3</sup> Directive 2001/42/EC on the assessment of the effects of certain plans and Programmes on the environment (the ‘SEA Directive’) implemented through The Environmental Assessment of Plans and Programmes Regulations 2004

<sup>4</sup> Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the ‘Habitats Directive’) implemented through The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

- what will be the situation *without* the eco-town? (the ‘business-as-usual’ option)
- what will be the situation *with* the eco-town?
- how can we mitigate/enhance effects?
- how should we monitor sustainability impacts?

1.5.2 These questions correspond to the key requirements of the SEA Directive, as set out in Annex I to the Directive – see Table 1.

1.5.3 In undertaking the appraisal for each location, we drew on a wide range of information including the Scoping Report; the developer’s proposal; discussions with the developer; discussions with the relevant local planning authority and, in some cases, the Government Office; the comments of the statutory consultees (the Environment Agency, Natural England etc.); and discussions with Communities and Local Government. We also visited each of the shortlisted locations.

**Table 1: Meeting the requirements of the SEA Directive**

Questions for each shortlisted location and associated development proposal	Key requirement of the SEA Directive (the ‘environmental report’ must include...)
What’s the objective of the proposal?	<b>“an outline of the contents, main objectives of the plan or Programme and relationship with other relevant plans and Programmes”</b> (Annex I(a))
What’s the policy context?	<b>“an outline of the contents, main objectives of the plan or Programme and relationship with other relevant plans and Programmes”</b> (Annex I(a))
What are the key sustainability objectives we need to consider?	<b>“the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or Programme and the way those objectives and any environmental considerations have been taken into account during its preparation”</b> (Annex I(e)) <sup>5</sup>

<sup>5</sup> Note that “the way those objectives and any environmental considerations have been taken into account during its preparation” is addressed in Section 3 for the Draft PPS and in each locational chapter

**Table 1: Meeting the requirements of the Strategic Environmental Assessment Directive (continued)**

Questions for each shortlisted location and associated development proposal	Key requirement of the SEA Directive (the 'environmental report' must include...)
What's the situation now? (including any existing problems)	<p><b><i>“the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or Programme”</i></b> (Annex 1(b))</p> <p><b><i>“the environmental characteristics of areas likely to be significantly affected”</i></b> (Annex 1(c))</p> <p><b><i>“any existing environmental problems which are relevant to the plan or Programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC”</i></b> [NB problems relating to European sites are addressed through the HRA] (Annex 1(d))</p>
What will be the situation without the eco-town? (the 'business-as-usual' option)	<p><b><i>“the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or Programme”</i></b> (Annex 1(b))</p>
What will be the situation with the eco-town?	<p><b><i>“the likely significant effects (1) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors</i></b> [our emphasis]</p> <p><b><i>(1) These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects”</i></b> (Annex 1(f))</p> <p><b><i>(1) These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects”</i></b> (Annex 1(f))</p>
How can we mitigate/enhance effects? (Scott Wilson's recommendations)	<p><b><i>“the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or Programme”</i></b> (Annex 1(g))</p>
How should we monitor sustainability impacts?	<p><b><i>“a description of the measures envisaged concerning monitoring...”</i></b> (Annex 1(i))</p>

- 1.5.4 It should be noted that the SA focused primarily on the merits of the proposed *location* as a suitable place to situate an eco-town since the location is fixed (notwithstanding the need to ultimately settle on a precise boundary for the development). However, we have also referred to the actual *development* proposed for that location (recognising that the current proposals for development at the various locations can obviously be modified

and doubtless will be as time goes on). Reference to the development itself was considered important in gauging sustainability impacts particularly since the development could potentially mitigate impacts associated with the location and also make the most of any locational opportunities.

- 1.5.5 The aim of this SA was not to determine whether an eco-town location and proposal was either acceptable – ie ‘sustainable’ – or unacceptable – ie ‘unsustainable’- and determine which locations progressed on this basis. The purpose of this SA was, rather, to explore the benefits and disadvantages associated with each of the locations and development proposals as an input to the Eco-towns Programme, and suggest ways in which their impact could be rendered more sustainable.

## 1.6 HRA methodology

- 1.6.1 Part II describes the HRA methodology in full. The requirement to undertake HRA arises from the Habitats Directive<sup>6</sup> which requires that plans and projects are subject to ‘Appropriate Assessment’ (AA) where they might have a significant effect on a European wildlife site. European sites include Special Areas of Conservation, Special Protection Areas and, as a matter of Government policy, Ramsar Sites. In order to establish whether or not an AA is necessary, plans and projects with potential effects must be ‘screened’ to determine the likelihood of their giving rise to significant effects – a so called HRA. All the proposed eco-town locations were screened and determined to have potential impacts on European sites. A full AA was therefore undertaken for each location and the assessment for North East Elsenham is documented in Section 3. The assessment involved identifying the European sites which could conceivably be impacted upon by development at the proposed location; establishing the environmental conditions needed to maintain the integrity of these sites (eg minimum air pollution or minimal recreational pressure); and assessing whether or not development at the location would adversely impact on these environmental conditions and therefore site integrity. Details of the ecological features of the European sites covered within the assessment, the reasons for their designation, their condition and the environmental conditions necessary to maintain their integrity are set out in the Annex, *Profile of European Sites*.
- 1.6.2 It should be noted that the objective of the HRA of the Eco-towns Programme was not to devise detailed site-specific measures for each of the current proposed eco-towns, but rather to use an appraisal of the current proposed Eco-towns as a tool to determine whether the policies and standards in the Draft PPS provide sufficient direction (in terms of both scope and detail) to enable eco-towns to deliver the detailed site-specific measures necessary to avoid or mitigate an adverse effect.

<sup>6</sup> Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora implemented in England through The Conservation (Natural Habitats &c. Regulations) 1994 (as amended)

## 2 Sustainability Appraisal

### 2.1 Introduction

2.1.1 This section sets out the **Sustainability Appraisal (SA)** of the shortlisted eco-town location and associated development proposal at **North East Elsenham**.

### 2.2 What's the objective of the proposal?

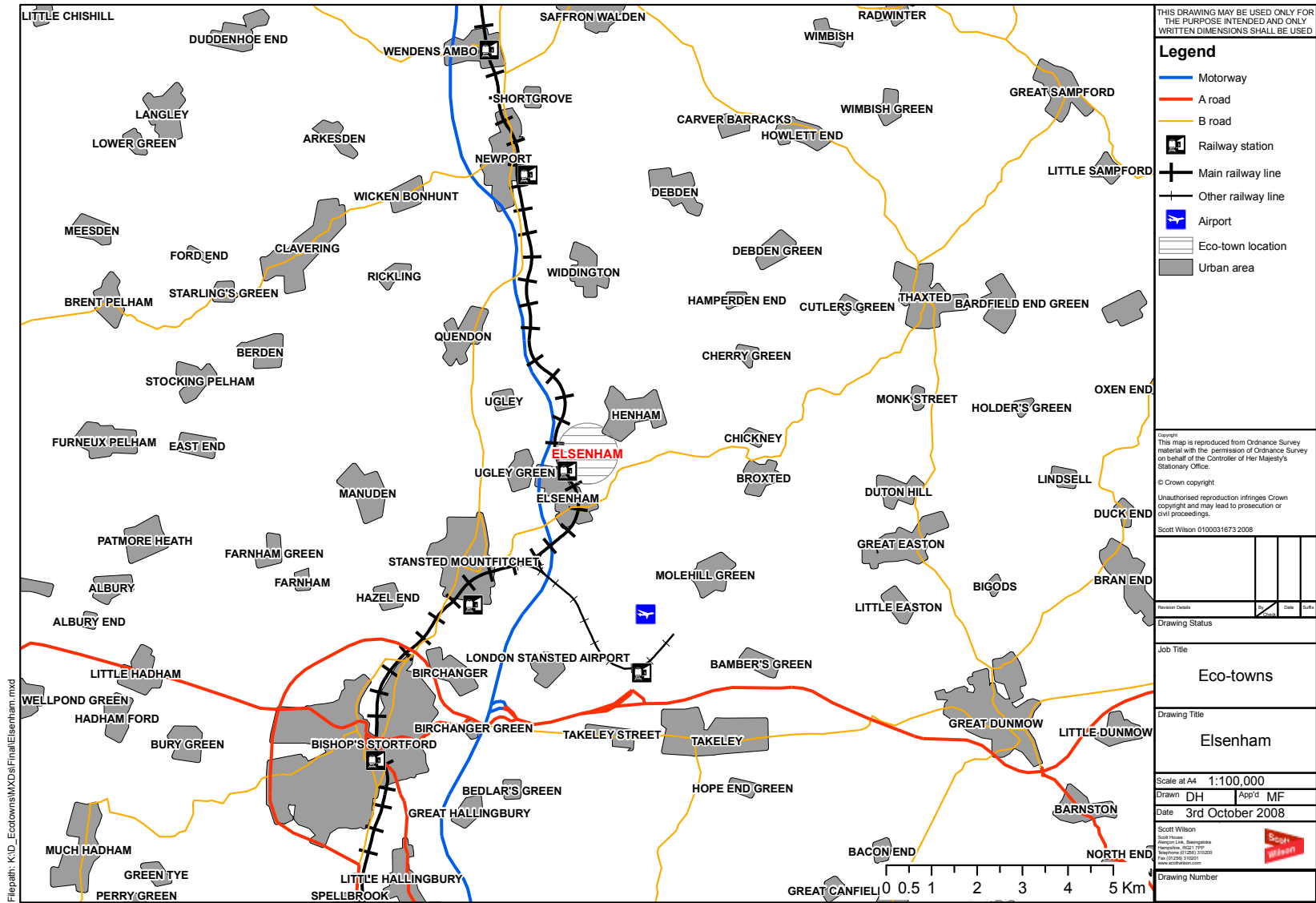
2.2.1 The Fairfield Partnership is proposing the development of an eco-town on a 265ha site north-east of Elsenham in Essex. The current proposal, which is the subject of this appraisal, is for a town comprising 5000 dwellings with related employment facilities and community infrastructure. Uttlesford District Council (see below) has expressed support for a development of up to 3000 dwellings.

2.2.2 The proposed location lies to the north of Stansted Airport close to the line of the M11, adjacent to the existing large village of Elsenham and close to the village of Henham. Larger settlements in the vicinity include Stansted Mountfitchet (2 miles), Bishops Stortford (4 miles) and Harlow (9 miles) (see Figure 1).

#### **Have any further local alternatives been proposed?**

2.2.3 No alternatives to the North East Elsenham eco-town location have been formally proposed by the local planning authority – Uttlesford District Council.

Figure 1: North East Elsenham eco-town – settlement pattern and transport infrastructure



## 2.3 What's the policy context?

- 2.3.1 The national policy context in relation to housing provision, climate change and other relevant issues is set out in Part ii. This section considers the policy context at regional and local level relevant to the shortlisted location and proposed development.
- 2.3.2 The Regional Spatial Strategy (RSS) for the East of England sets a minimum regional housing target for the period 2006 to 2021 of 402,540 net additional dwellings. However, the Plan states that while this figure (which equates to at least 26,830 dwellings per annum) represents a significant step towards a more adequate rate of housing provision, it is less than forecast household growth and less than the National Housing and Planning Advice Unit (NHPAU) suggests is needed to avoid further deterioration in affordability<sup>7</sup>. In light of this, the East of England Plan points to the role of eco-towns in further increasing housing provision.
- 2.3.3 The East of England Plan does not refer to Elsenham as a specific location for growth. However, the report of the Independent Panel which oversaw the Examination in Public (EiP) – the 'Panel Report' – in considering the sustainability merits of further growth in the A120 corridor stated: *"We see the merit of arguments put forward by some participants in favour of Stansted Mountfitchet and Elsenham, on the West Anglia rail line, as locations for some development as an alternative to further additions in the A120 settlements."*
- 2.3.4 A new settlement at this location has been considered as part of the development of the Core Strategy for the Uttlesford Local Development Framework. The Core Strategy Issues and Options Paper identified nine options for growth, including one which was to concentrate development in a new settlement. Following consultation on the Issues and Options the Council decided the preferred option would be for the majority of growth to be delivered through a new settlement of 3,000 new homes between Elsenham and Henham. However, Uttlesford District Council are now considering the response to consultation and carrying out a programme of further technical studies before deciding on its submission proposals.

<sup>7</sup> National Housing and Planning Advice Unit (2007). *Developing a target range for the supply of new homes across England* [online] available at: <http://www.communities.gov.uk/nhpau/keypublications/reports/supplynewhomes/>

## 2.4 What are the key sustainability objectives we need to consider?

2.4.1 Separate preliminary scoping work undertaken on behalf of Communities and Local Government identified a significant number of potentially relevant sustainability objectives to inform the appraisal. Taking into account this initial work, Scott Wilson has identified 14 core sustainability issues which will provide the basis for the SA of the locations and associated development proposals (no priority should be inferred from the ordering):

### **Environment**

- biodiversity and green infrastructure
- climate change adaptation and flood risk
- climate change mitigation
- landscape and historic environment
- waste
- water resources and water quality

### **Socio-economic**

- community infrastructure
- community wellbeing
- decent and affordable homes
- transport and accessibility
- employment and economy

### **Spatial issues**

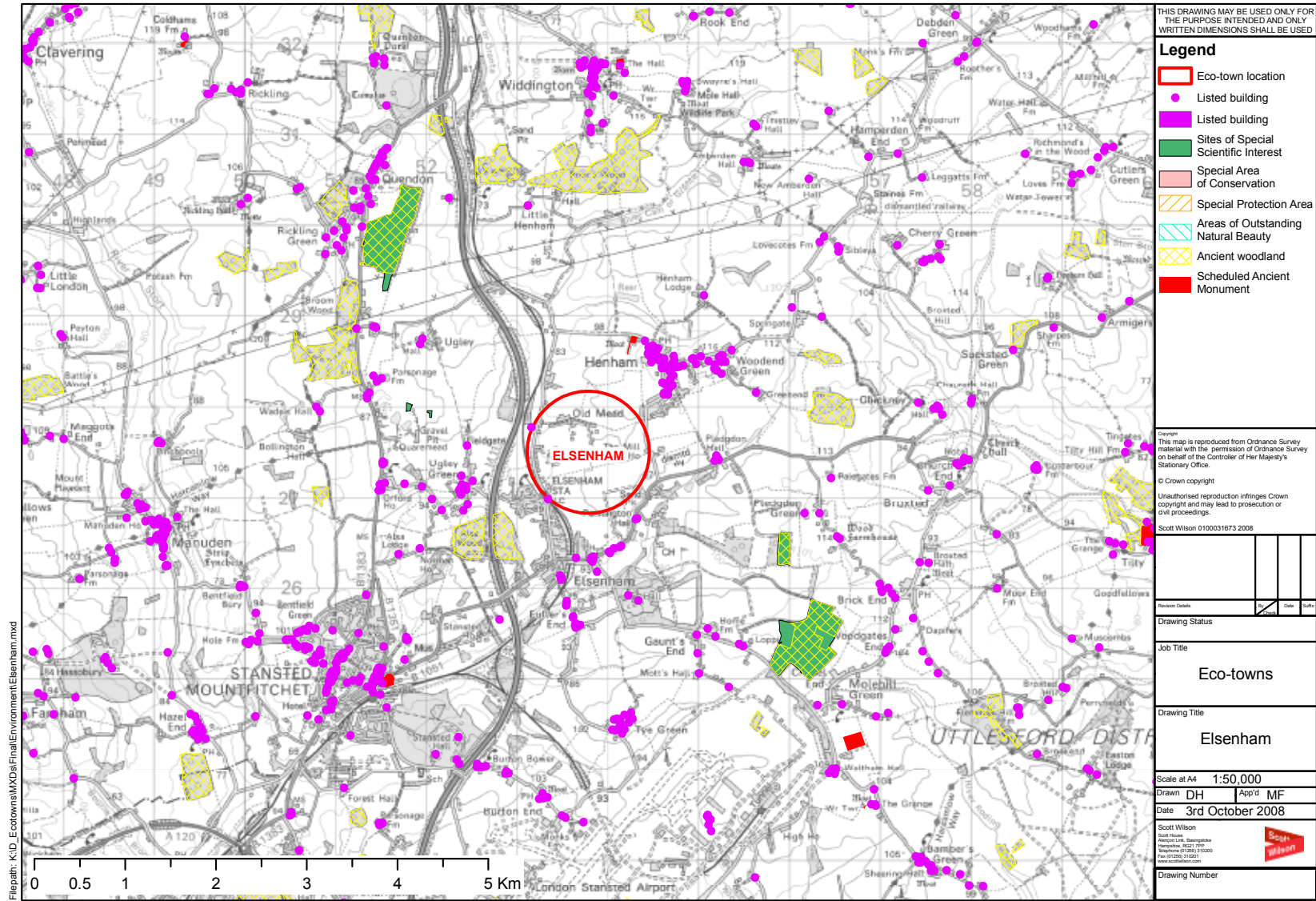
- spatial issues

## 2.5 What's the situation now? (including any existing problems)

### **Biodiversity and green infrastructure**

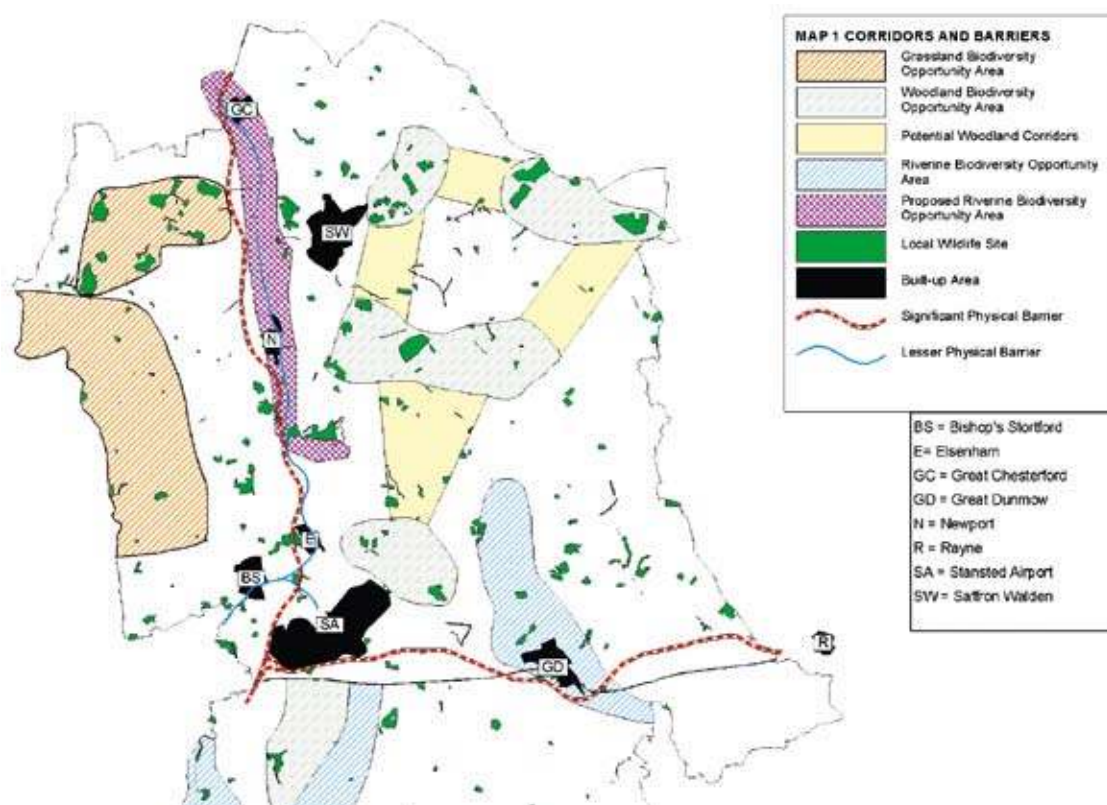
- 2.5.1 As shown in Figure 2, the biodiversity value of this part of Essex is primarily associated with numerous patches of woodland dotted throughout the landscape. Many are classified as being ancient and semi-natural and of these many are designated as either a Site of Special Scientific Importance (SSSI) or as a Local Wildlife Site (LoWS).
- 2.5.2 Elsenham Woods SSSI is located about 2.5km south east of the proposed site. This SSSI comprises two separate woodlands:
- Eastend Wood – (40 ha) is in favourable condition
  - Pledgen Wood – is in unfavourable condition, due primarily to deer grazing and lack of woodland management.
- 2.5.3 It is noted that at Pledgen Wood ground flora on rides is becoming rank, limiting the diversity of ground flora. This may indicate that further recreational pressure (eg from dog walkers), could entrench its unfavourable condition. Eastend Wood is a diverse woodland with an interesting flora. It is stated that there is a 'good ride structure', which indicates that this should be a relatively accessible woodland that is able to absorb a degree of increased recreational pressure.

Figure 2: North East Elsenham eco-town location and environmental constraints



2.5.4 The SSSI woodlands are part of a network of small woodlands to the south and east of the site, many of which appear to be accessible by public footpath. A number of these other woodland patches are designated as LoWS. These have been identified by the UDC Wildlife Site Review (2007) as part of a woodland biodiversity opportunity area (see Figure 3). Networks of woodlands are seen as important in the Essex context for maintenance of valued biodiversity, including Oxlip.

**Figure 3: Uttlesford ecological networks map**



2.5.5 Elsenham is surrounded by high quality countryside (including a high proportion of farmland managed as part of agri-environment schemes). However, Uttlesford District Council suggest that opportunities for informed outdoor recreation within the vicinity of Elsenham are somewhat limited<sup>8</sup>. Four miles south of Elsenham is Hatfield Forest National Nature Reserve (NNR) an important Royal Forest that has survived since medieval times and is already under considerable recreational pressure.

2.5.6 The fields which comprise the site currently comprise a mixture of pasture and cereal cultivation. A former sand and gravel quarry in the south-eastern corner of the site includes some grassland and scrub. One pond is present on-site and numerous adjacent to the site, which have the potential to support amphibians.

<sup>8</sup> Per comms

2.5.7 Habitats and species identified in the Essex Biodiversity Action Plan (BAP) that require consideration include:<sup>9</sup>

- ancient woodland
  - numerous nearby patches
- ancient and/or Species Rich Hedgerows and Green Lanes
  - the fields at the site are mostly unhedged, with only a few remnants of hawthorn-hedge and occasional mature trees
- cereal field margins
  - the site does fall within a potential hot-spot for arable weeds due to the underlying calcareous clay geology
- Oxlip (confined to ancient woods, especially on boulder clay areas)
  - populations in nearby woodlands
- Brown Hare (grassland, open woodland)
  - habitat on site is considered suitable
- Water Vole (rivers and wetlands)
  - there are a number of dry and wet drainage ditches around the site, at least one of which is tree-lined and several might have the potential to support water vole
- Skylark (large open fields)
  - present and most likely breeding on-site

### **Climate change adaptation and flood risk**

2.5.8 The Strategic Flood Risk Assessment (SFRA) for Uttlesford District (2008) found that development at land north of Elsenham has the potential to avoid Flood Risk Zones 2 and 3 but that:

- there is potential for surface water flooding and flooding from culvert blockage
- there is potential for fluvial flooding at the western end of Old Mead Road, from a tributary of the River Cam
- there is potential for increased downstream flood risk at Newport and Stansted Mountfitchet as a result of increased run-off into the River Cam and the Stansted Brook (a tributary of the River Stort) respectively
- the west of the proposed location is well drained soil, but to the east soil is slowly permeable. Considering the soil type and the slope of the land there is some potential for increased surface water flood risk at Elsenham as a result of runoff

<sup>9</sup> Adapted from the 'Elsenham ecological assessment (LDA Design for the Fairfield Partnership, 2007).

- The site will remain predominantly flood risk zone 1 under a climate change scenario.
- There is potential for SUDS (location dependent)

**2.5.9** A drainage strategy has also been prepared by the agents of the site promoters. This makes use of a detailed map of landform across the site, which shows that there are three main watersheds. This map shows that a significant proportion of the site drains naturally to the west and south and so there will be potential for increased run-off to move in the direction of the existing settlement in this direction. The strategy states that ultimately water from the site will drain into the River Stort, which appears to contradict the SFRA findings and signify a need to focus down-stream flood risk concerns on Stansted Mountfitchet.

**2.5.10** The site is not located in a water source protection zone (which can constrain the location of SUDS and other activities). The underlying geology to the west is sands and gravels, which will be suited to the incorporation of SUDS, and investigate the appropriateness infiltration methods’.

### **Climate change mitigation**

**2.5.11** Uttlesford performs relatively poorly in terms of CO<sub>2</sub> emissions per capita. Domestic CO<sub>2</sub> emissions per capita are the highest in the East of England, at 13 per cent above the regional average. Uttlesford also performs poorly in terms of total CO<sub>2</sub> emissions per capita (20 per cent above the regional average).

**2.5.12** A 2008 study entitled ‘Renewable Energy for Uttlesford’ identified that Uttlesford does have potential for energy from building integrated photovoltaics; biofuels (there may be potential for sourcing locally, including possibly through re-instatement of traditional coppice woodland management); wind (although Stansted Airport may be a constraint); and ground-source heat-pumps.

### **Landscape and historic environment**

**2.5.13** A large part of North Essex is still surprisingly rural, relating well to the generally rural character of South Suffolk, having largely avoided the 20th century outward migration of London. The countryside ends abruptly in South Essex, shown by an increase in the size of villages, a reduction in the area of countryside between villages and an increase in major roads.<sup>10</sup>

<sup>10</sup> *South Suffolk and North Essex Joint Character Area Description* [online] available at: [www.countryside.gov.uk/LAR/Landscape/CC/jca.asp](http://www.countryside.gov.uk/LAR/Landscape/CC/jca.asp)

- 2.5.14 A 2006 Landscape Character Assessment has classified the proposed location at North East Elsenham as being associated with the 'Broxted Farmland Plateau' Landscape Character Area (LCA). To the west of Elsenham, the Stort Valley is described as a separate LCA.
- 2.5.15 The farmland plateau is characterised by an elevated, gently rolling landscape incised by smaller rivers and streams; networks of winding lanes; and medium to large-scale predominantly arable fields. There is an open yet wooded character, demonstrating aspects of 'ancient countryside', but also the impact of 20th century field rationalization and agricultural intensification. Hedgerows tend to be lost or gappy, predominantly as a result of Dutch Elm disease. A significant proportion of woodland is semi-natural and of ancient origin, and many hedgerows are also of considerable antiquity. Rural lanes can also have significant historic and landscape value. There is not a high density of protected lanes in the vicinity of Elsenham and Henham, although there is one to the south and a higher density to the east.
- 2.5.16 At a larger scale, the claylands of North Essex and South Suffolk are an area of exceptional medieval towns and villages, many of which have retained a beauty and charm despite accommodating significant post-war housing.<sup>11</sup> Villages tend to be larger than in the South Norfolk and High Suffolk Claylands due to thriving pre-industrial cottage industries, but are still quite widely spaced. Henham and, to a lesser extent, Elsenham are both good examples of characteristic Essex villages. Whilst Elsenham has been subject to decades of post-war development, Henham has retained much of its historic character<sup>12</sup>.
- 2.5.17 Figure 2 shows Henham to have a high concentration of listed buildings and part of Henham (about 70 per cent) is designated as a conservation area. The Henham Historic Settlement Characterisation (2007) describes the sensitivity of Henham's historic character to development to the south west of the village (the location of the proposed eco-town). This is an open arable landscape of relatively late enclosure former common land. The study concludes that (subject to good landscaping and design) development on this land would not impact on the historic core due to the presence of extensive twentieth century development acting as a barrier.
- 2.5.18 To the north-west of the church in Henham is the important moated site now comprising Down Hall House. This is designated as a Scheduled Ancient Monument, probably being the site of a former brick built homestead known as Henham Hall.

<sup>11</sup> Ibid

<sup>12</sup> Elsenham Settlement Study (LDA Design for the Fairfield Partnership, 2007)

2.5.19 A number of listed buildings are also located at the eastern end of Elsenham (the area known as Elsenham Cross) and several other listed buildings are located adjacent to the site elsewhere, including a waiting room of Elsenham Station, Old Mead, Pennington Hall and Pledgdon Hall. Stansted Mountfitchet has a historic core with a large number of vernacular buildings, although it is surrounded by modern infill developments.<sup>13</sup>

2.5.20 Stansted Airport is a major influence on landscape character and the sound of aircraft is almost constant. The effects of heavy traffic and aircraft noise are evident particularly near Stansted Mountfitchet and Elsenham. However, away from the Stansted flight path tranquillity in the Broxted Farmland Plateau LCA is moderate to strong.<sup>14</sup>

2.5.21 The Stort River Valley LCA possesses a varied character area that changes from a relatively peaceful and rural character in the north, progressing to a busier and more urban character around Stansted Mountfitchet. Overall this character area has relatively high sensitivity to change.

2.5.22 The key issues identified by the 2006 Landscape Character Assessment include:

- continuation of the general erosion of landscape character, quality and diversity.
- pressure from increased traffic and road improvements on rural lanes.
- expansion of village settlements having an urbanising effect on rural character.
- increased congestion surrounding routes to key employment and residential areas

2.5.23 Land north east of Elsenham is not subject to any landscape designations, although it used to fall within a locally designated Special Landscape Area (SLA). The 'North Essex', SLA incorporated much of the District, including Elsenham and Henham.

### **Waste**

2.5.24 In 2006 – 2007 42.82 per cent of Uttlesford District's waste was recycled or composted. The District sent 1.05 tonnes per dwelling to landfill in 1999 – 2000. This had fallen to 0.71 tonnes by 2006 – 2007, a reduction of 32.38 per cent. The County sent 0.86 tonnes of waste per dwelling to landfill in 1999 – 2000 and 0.73 tonnes per dwelling in 2006 – 2007. This is a reduction of 14.34 per cent. However, there is a general lack of landfill capacity in the area.

<sup>13</sup> Braintree, Brentwood, Chelmsford, Maldon and Uttlesford Landscape Character Assessments (Chris Blandford Associates, 2006)

<sup>14</sup> Ibid

### **Water resources and water quality**

- 2.5.25 The East of England is already the driest region in the UK and pressure on water resources is likely to grow due to altered rainfall patterns and increased temperatures associated with climate change. This is significant in a region whose population is the fastest growing in the country and where agriculture plays an important role in the economy.
- 2.5.26 The site is partly within the Cam and Ely Ouse CAMS area, and partly within the Upper Lee CAMS area, which may have impact on either the CAM or Stort catchments.
- 2.5.27 Three Valleys Water are the local water supplier for the Elsenham area, and the primary source of water is from groundwater/reservoirs. They have supplied an initial view that water supply to the area is feasible with the installation of almost 6.5km of new piping.
- 2.5.28 In terms of sewage treatment, Elsenham lies on the boundary between the Anglian Water and Thames Water service areas.
- 2.5.29 Daily domestic water use per person in 2006/07 was 168 litres, which is well above the industry average for that year (148 litres), and also well above the per capita water use figure for the neighbouring Cambridge Water Company area (141 litres).

### **Community infrastructure**

- 2.5.30 Uttlesford Super Output Area (SOA) 005A includes the eastern part of Elsenham, Henham and the countryside to the east of the M11 surrounding Elsenham and Henham. SOA 005B comprises the relatively densely populated area of Elsenham surrounding the rail station.
- 2.5.31 In terms of barriers to housing and services, as calculated by the Index of Multiple Deprivation (2007), SOA 005A performs notably well for a rural area, reflecting the fact that it is not isolated from the main settlement corridor. SOA 005B scores better than any other part of the district in terms of this indicator.
- 2.5.32 In 2001 Elsenham had a population of 2510 in 970 households. The 2001 census also recorded that there were 429 jobs in Elsenham, and 13 per cent of residents worked from home. Elsenham has one pub and a small row of shops on the high street including a convenience store and a small Post Office. A doctor's surgery is located in the village and a dentist's surgery is located in Stansted Mountfitchet.

- 2.5.33 Henham (population 1200) is described by Historic Settlement Characterisation (2007) as having little local employment other than agriculture or agricultural service industries. However, there is a popular pub, a community shop run by volunteers and a well-attended primary school.
- 2.5.34 Stansted Mountfitchet has grown significantly during the 20th century, principally due to its location in close proximity to good communications. The population is currently about 5,500 but will rise significantly when the additional development at Forest Hall Park has been completed.

### **Community wellbeing**

- 2.5.35 Uttlesford is not a very ethnically diverse district, with 98.17 per cent of the population being white; 1.1 per cent of a mixed ethnic background; 0.55 per cent Asian or Asian British; 0.16 per cent black or black British; and 0.46 per cent Chinese or other (2001 census data).
- 2.5.36 Uttlesford is a relatively affluent area, scoring second lowest in terms of the multiple deprivation amongst local authorities in the East of England (with a score of 6.94).
- 2.5.37 Activities for teenagers is the first priority for improvement in the local area as defined by the local residents.<sup>15</sup>
- 2.5.38 SOA 005A is the third least deprived in Uttlesford, after an SOA in Saffron Walden and an SOA in Stansted Mountfitchet, and is within the lowest 2 per cent of SOAs nationally in terms of deprivation. SOA 005B is comfortably within the top 50 per cent of SOAs in Uttlesford in terms of deprivation. The SOA directly to the south, which includes the Airport, Burton End and the southern section of Stansted Mountfitchet, is the most deprived SOA in Uttlesford District by some margin, and within the top 50 per cent of SOAs nationally in terms of deprivation. It scores particularly badly in terms of income, employment, health and education – those domains of the overall Index of Multiple Deprivation (IMD) that might be considered the key determinants of deprivation.

### **Decent and affordable homes**

- 2.5.39 The average house-price in Uttlesford in Summer 2008 was £295,000, the third highest of the 14 Essex authorities. Prices in Uttlesford have decreased 3 per cent this quarter (fifth worst performance amongst Essex authorities) and increased by 0.7 per cent over the past year (second worst performance amongst Essex authorities).

<sup>15</sup> Audit Commission Area Profile

2.5.40 The Office of National Statistics 'Difficulty in accessing owner-occupation indicator for 2007 showed Uttlesford to have a score of 75.86, which is below the mean score for local authorities in the East of England. The score in 2004 was 57.14.

2.5.41 The Uttlesford Local Plan says for the period 2001 -2006 the requirement would be 300 homes per year and 230 homes per year for the period for 2006-2011. The housing needs survey identified a figure of 570 units per year. Affordable housing is the third priority for improvement in the local area as defined by the local residents.<sup>16</sup>

### **Transport and accessibility**

2.5.42 Public transport is the second priority for improvement in the local area as defined by the local residents and traffic congestion is the third priority.<sup>17</sup>

2.5.43 In 2001 66.8 per cent of the resident population of Uttlesford travelled to work by private motor vehicle, which is above the national average, but below the national and regional median in terms of local authorities. The percentage of people who travel to work by public transport is below the national average, but similar to the regional average (9.1 per cent). The percentage of people who walk or cycle to work is very low (10.5 per cent) – which is well within the national lower quartile. 27.7 per cent of people travelled more than 12 miles to work in 2001, which is well within the upper quartile nationally and the second highest value for a local authority in the East of England.

2.5.44 The proposed site is located adjacent to Elsenham railway station providing links to London and Harlow to the south and Cambridge to the north. The station is classified as a 'Category E' station, reflecting its lack of facilities (eg no public toilets and poor car parking), although it does have a number of important facilities including a waiting room and two ticket machines. There are currently two services per hour in peak time and one in off-peak times. Trains between Peterborough and Stansted Airport pass through Elsenham but do not stop.

2.5.45 Network Rail plans to extend the platforms on a number of stations on the London to Cambridge West Anglia route (including Elsenham) so that they can accommodate 12 carriage trains as opposed to 8, therefore increasing capacity by 50 per cent. This scheme is included in Network Rail's draft Business Plan covering Control Period 4, 2009-2014.

2.5.46 There are few existing bus services operating in the vicinity of Elsenham, with only one service that is relatively frequent (an hourly service).

<sup>16</sup> Audit Commission Area Profile

<sup>17</sup> Ibid.

2.5.47 Key destinations that fall within a 5km radius<sup>18</sup> of the site, and therefore might easily be reached by bicycle, include:

- part of Stansted Mountfitchet
- Stansted Airport.

2.5.48 The surrounding road network in the vicinity of the site is characterised by single carriageway unclassified roads, with relatively low traffic levels.

### **Employment and economy**

2.5.49 The pressures of development are a result of locally generated needs for requirements such as a strong housing market, jobs and transport. They are also a product of externally generated growth factors such as Stansted Airport and the M25/M11 corridor. The area is also well located with regard to Stansted Airport, a major employer of regional significance.

### **Spatial Issues**

2.5.50 Between 1 April 2006 and 31 March 2007 a total of 363 gross residential units were built in Uttlesford. Of these 229 were on previously developed land (PDL) (63 per cent). In the previous year 554 units were built of which 340 were on PDL (61 per cent).

2.5.51 By the very nature of Uttlesford there is limited PDL in the District. The percentage of homes built on PDL will therefore reflect the scale of housing required and the availability of PDL in the district.

2.5.52 The Local Plan adopted in January 2005 contains policies, which allow development on PDL and safeguarded greenfield sites. However three of the major sites permitted for urban expansion and settlement expansion at Stansted Mountfitchet, Takeley and Great Dunmow are not classed as PDL. Once development proceeds on these sites the percentage of homes built on PDL will decrease significantly. The target for use of PDL in the adopted Plan is therefore 40 per cent.

## **2.6 What will be the situation *without* the eco-town? (the 'business-as-usual' option)**

2.6.1 If the eco-town does not progress two things may happen. On the one hand, the area may be developed as a smaller settlement (3000 rather than 5000 dwellings) as proposed by Uttlesford District Council. Alternately, there may be no development and the area will remain as agricultural land.

<sup>18</sup> PPG13 mentions a 5km radius as the maximum distance that people will be willing to cycle rather than drive

- 2.6.2 The implication of the first scenario is that there will still be significant development on a greenfield site of high agricultural value. A smaller scale of development will mean a reduction in the impacts on the local communities and the surroundings. However, a smaller settlement may be less self-sufficient, thus the reduction in traffic may not be proportional to the reduction in size. A smaller settlement will have fewer community facilities and shops and therefore reduce the potential benefits to the local population. A new smaller settlement, because of its size, may be less exemplary in terms sustainability.
- 2.6.3 In the latter scenario there will be few changes. Climate change might impact on the crops grown but the site will remain substantially as now. The housing needs that would have been satisfied in Elsenham will be satisfied in another part of Uttlesford.
- 2.6.4 Under either scenario there is the potential for the future baseline to alter as a result of changes to Stansted Airport. In 2003, the Government White Paper – The Future of Air Transport identified Stansted as a potential location for a new full length runway. However, it also stated that Stansted must first seek to make better use of existing capacity. The planning application (known as Generation 1) was approved in October 2008 by the Government. The decision, taken jointly by Transport Secretary Geoff Hoon and Secretary of State for Communities and Local Government Hazel Blears, will allow Stansted to serve up to 25 million passengers a year. The Government approval means 35 million passengers a year will be able to pass through the airport, instead of the current limit at 25 million, and the number of aircraft movements could rise from 241,000 to 264,000 a year. A transport assessment undertaken for BAA concluded that the impacts of G1 airport growth on local roads would not be significant.
- 2.6.5 The Generation 2 expansion proposal is to add a second runway at Stansted. If granted planning consent this would have more severe implications for the proposed development at Elsenham, not least because there would be major changes to the local road network in the vicinity of the airport.

## 2.7 What will be the situation with the eco-town?

### Introduction

- 2.7.1 In this section we consider the sustainability of the proposed location and development at North East Elsenham. The discussion is structured around the sustainability issues derived from the earlier scoping work.
- 2.7.2 The appraisal draws on information derived from:
- the scoping studies
  - the developer's proposal
  - discussions with the agents for the Fairfield Partnership

- discussions with Uttlesford District Council
- a site visit
- the comments of statutory agencies (eg English Heritage, the Environment Agency, Natural England) and the Department of Transport
- discussions with Communities and Local Government.

### **Biodiversity and green infrastructure**

- 2.7.3** The Habitat Regulations Assessment is set out in detail in Section 3 of this chapter. In summary, five Natura 2000 sites (Lee Valley SPA & Ramsar site, Wormley Hoddesdonpark Woods SAC, Colne Estuary SPA, Blackwater Estuary SPA and Essex Estuaries SAC) were included in the assessment. It did not prove possible to say with confidence that the development at North East Elsenham would not lead to adverse effects on European sites (particularly the Colne Estuary) as a result of increased abstraction, when considered in combination with other relevant plans and projects, without further amendments to the Draft PPS and these are detailed in Section 3. This will be informed by a number of studies including the Water Cycle Strategy, Flood Risk Assessment and an Environmental Impact Assessment at the appropriate stage.
- 2.7.4** A phase 1 habitat survey has been undertaken by the proponent's agents which has identified that the site does not have any significant ecological constraints, although it did note the need for further protected species surveys, which are currently underway.
- 2.7.5** There are a number of woodlands of local and national importance for nature conservation within an accessible distance of the site. The development could place increased recreational pressure on Hatfield Forest SSSI/NNR.
- 2.7.6** This proposal does not appear to impact on any significant grassland sites and the proposal promises the creation of new habitats increasing biodiversity on the site.<sup>19</sup> In particular, the proposal includes the creation of a "green ring" around the development. This is intended as a strategic gap and multi-functional greenspace providing opportunities for recreation, biodiversity and sustainable drainage. It is likely that the existing sandpits, which have a degree of existing character and biodiversity value, can be integrated into the green ring.
- 2.7.7** It is within the wider Green Arc initiative which has multiple objectives around land management, access and strategic green space provision. Provision of a green infrastructure strategy could include a contribution to enhancing the resilience/recreational carrying capacity of Hatfield Forest. The green infrastructure strategy should also link the site to its surrounding landscape.

<sup>19</sup> The Grasslands Trust. Response to the Living a Greener Future consultation

### **Climate change adaptation and flood risk**

- 2.7.8 The site catchment drains by various tributaries to both the River Carn and the River Stort. The exact extent of the watershed will be confirmed by the findings of the Flood Risk Assessment..
- 2.7.9 Fluvial flood risk is unlikely to be an issue on-site, however the effects of surface water run-off on areas of existing development (Elsenham and Old Mead) require further consideration as does the potential for increased downstream flood risk (particularly at Stansted Mountfitchet). The findings of more detailed studies must inform the location of SUDS systems. Currently it is proposed that SUDS will be concentrated around the western and southern boundaries (incorporated as part of the proposed 'green ring' surrounding the site). The arrangement of SUDS will also be determined by further investigation into the permeability and underlying geology across the site.

### **Climate change mitigation**

- 2.7.10 Uttlesford has potential to employ a range of methods of renewable energy generation, although wind may be constrained. The proponents are aiming for the site to be self-sufficient in terms of energy production. Current proposals to realise this aim involve a patchwork of energy systems including solar, ground source and biomass. It is proposed that energy supplies are managed by a Multi-Utility Supply Company (MUSCO) comprising a specialist provider of sustainable energy and the community. It is stated that the proximity of Elsenham and Henham could provide opportunities for district heating to be extended to these communities.

### **Landscape and historic environment**

- 2.7.11 As described by English Heritage, Uttlesford is a district of 'exceptional historic interest'. However, as suggested by representations made as part of the development of the Uttlesford Core Strategy, development at this location would be the less destructive for the general character of the District as a whole than development at many other locations.
- 2.7.12 It is not thought likely that there will be direct effects on the characteristic historic core of Henham, although there is potential for impacts on the rural lanes and footpaths that provide access to and from Henham. Furthermore, there will be impacts on the views of characteristic Uttlesford countryside as seen from the edge of the village.
- 2.7.13 There are numerous listed buildings around the edge of the proposed site. It is expected that the green ring will be able to provide a good degree of mitigation and so protect the setting of the listed buildings that border the site as well as the Scheduled Ancient Monument.

2.7.14 An initial desk-based archaeological study has been undertaken by the proponent's agents which has found that there is a moderate to high archaeological potential for parts of the site.

### **Waste**

2.7.15 Uttlesford District Council performs better than the Essex average in terms of sustainable waste management and it is proposed to develop a waste management strategy integrated with the District Council's strategy. There may be opportunities for waste to energy schemes such as anaerobic digestion and for composting in the green ring.

### **Water resources and water quality**

2.7.16 Water resources in the region are under pressure and the Environment Agency emphasise the degree of local constraints in relation to water resources. North East Elsenham is located in an area which is classed as 'seriously water stressed' and the local water resource management unit is 'over-licensed'. This means that any increased abstraction would be likely to result in 'over-abstraction'. The water company has included in its draft plan for 2010 to 2035 that it may lose 20 per cent of its licensed abstraction volume in 2015 to 2027 due to the requirements of the Water Framework Directive. It is likely that the only way of providing water is through pumping from a neighbouring area which would have cost and carbon implications. The benefits of greywater recycling and rain water harvesting are being investigated through the Water Cycle Strategy to reduce pressure on the water supply. The Water Cycle Strategy will also look at how demand and energy can be reduced to achieve the Level 6 Code for Sustainable Homes.

2.7.17 The proponents are currently undertaking a water cycle study and proposals for water supply and wastewater disposal have still to be developed in detail. The Environment Agency has indicated the need for a water cycle study, for high levels of water efficiency and for investment in wastewater disposal. The Environment Agency has concerns about potential problems with discharge of foul water at this location as it is at the top of two catchment areas (Cam and Stort and Upper Lee). This is influenced by the small size of the watercourse in the vicinity, which means they are likely to be both water quality and volume issues. Therefore options need to be looked at as part of a water cycle strategy, but need to avoid adverse impacts locally and maintain the required Water Framework Directive Standards. In order to achieve this balance a pump operated solution requires consideration, which has its own environmental and sustainability implications.

2.7.18 Hydrogeologically, the site is located in a potentially sensitive location, as it is located on a major aquifer, between two active landfills and a source protection zone is nearby.<sup>20</sup> Improvement of the existing Stansted

<sup>20</sup> Environment Agency, information submitted to Communities and Local Government

Mountfichet sewage treatment works and associated infrastructure will most likely be required to receive the increased flows from the development.<sup>21</sup> The promoter points out that this option will be evaluated further in tandem with alternative potential solutions, including on-site alternative schemes in order to achieve the most sustainable solution possible.

### **Community infrastructure**

2.7.19 The promoters state the aim of expanding Elsenham so that it is able to adopt the functions of a main settlement in Uttlesford District. In terms of facilities, the proponents state that their aim is to improve access for those living in the immediately surrounding villages, but not to create a service centre that attracts people from further afield.

2.7.20 Current proposals for service provision include:

- a secondary school – potentially involving the relocation and expansion of the current Stansted Mountfichet College
- three primary schools
- a sports hub associated with the secondary school
- a poly clinic or equivalent
- a Discovery Centre in the Town Park to provide education and training relating to sustainability
- a hotel
- a major food store and associated shopping
- community halls and places of worship
- allotments and community gardens.

2.7.21 A secondary school is currently located in Stansted Mountfichet. The proponents propose to re-locate this secondary school to Elsenham, which will enable its expansion and allow for an improvement in terms of facilities. This will ultimately be a decision for the County Council, education authority, and school governors.<sup>22</sup>

### **Community wellbeing**

2.7.22 The proximity of the eco-town to the existing communities of Elsenham (900 houses) Henham (fewer houses) and Old Mead (a private road) poses problems and opportunities. The Council's community involvement on the Local Development Framework (LDF) Core Strategy has identified substantial opposition to its Preferred Options including a 3,000 home new settlement

<sup>21</sup> Preliminary utilities appraisal and drainage strategy (WSP, 2008)

<sup>22</sup> The Fairfield Partnership, *per comms*

at Elsenham. It may be anticipated that opposition to the eco town proposal for “a minimum of 5,000 homes and possibly more in the longer term” will be expressed on broadly similar grounds. However, the eco-town could also provide access to new and different employment opportunities, services and facilities. The present approach of the proponents is to try to maintain the distinct character of Elsenham and Henham through physical separation and landscape proposals.

**2.7.23** It is proposed to develop an Elsenham Community Trust as a business organisation to manage the eco-town. The Trust may be endowed with buildings or land to provide a steady source of income and will have a wide remit including town management, employment creation and community development.

**2.7.24** A separate consideration that has been raised by objectors is the possibility of the Elsenham proposal prejudicing the delivery of regeneration in Harlow by competing for jobs and infrastructure funding.<sup>23</sup> However, there is no-evidence to support this claim, so this will require further consideration.

### **Decent and affordable homes**

**2.7.25** The proponents are proposing that all new houses are built to at least Sustainable Code for Homes Level 4. It is intended that at least 30% and up to 40% of the homes will be affordable including shared ownership. The exact level and mix of affordable housing will be subject to negotiation. It is intended that 20 per cent of new dwellings will be apartments and 80 per cent family houses.

### **Transport and accessibility**

**2.7.26** There are currently unsustainable transport patterns in the area. The proposal seeks to reduce dependency on the private car by maximising use of the existing railway station and providing much-improved bus services. Proposals focus on the development of the station as a public transport hub including improvements to facilities at the station and linked to a new frequent circular bus service serving Elsenham, Stansted Mountfichet, Bishops Stortford and Stansted Airport. It is hoped that the four stops on this service can complement one another in terms of the functions that they provide (eg higher order services will be accessed at Bishop’s Stortford). The service will run up to every 10 to 15 minutes, which will be a major improvement on the current bus service in the area.

**2.7.27** A major strength of this location is the existing train station on the West Anglian Mainline, with a regular service into London. There are questions regarding capacity constraints on the service (relating to speed restrictions

<sup>23</sup> Essex County Council. Response to the Living a Greener Future consultation (2008)

and the accommodation of express trains),<sup>24</sup> although there are scheduled improvements to increase the capacity by 50 per cent.

**2.7.28** Although the site is in close proximity to the M11, road access to the nearest junction is not straightforward. Nonetheless, due to the relatively small size of Bishop's Stortford there may be a high potential for long distance travel by car to higher order settlements. The proximity to Stansted Airport, although it may provide employment, is unlikely to be a regular non-work related destination.

**2.7.29** Immediate road access to the proposed location is primarily by secondary roads with width constraints. However, the aim is to reduce journeys from source and therefore it is proposed to undertake improvements within existing road space to provide sufficient residual highway capacity only to cater for trips in the most sustainable scenario. The great majority of movement from an eco-town north of Elsenham will be south and west. The proponents concede that Stansted Mountfitchet is congested at the am and pm peaks, and suggest that there will be a self-regulating effect, with residents of the eco-town choosing to avoid Stansted Mountfitchet. Irrespective of this, transport measures are proposed to mitigate the impact of development but at the same time discourage drivers using the route through Stansted Mountfitchet. Irrespective of this, transport measures are proposed to mitigate the impact of development but at the same time discourage drivers using the route through Stansted Mountfitchet except those with a local origin or destination.

**2.7.30** Currently, a popular route to access Bishop's Stortford and the M11 by car passes through Stansted Mountfitchet. There is potential for another, more southerly route (Hall Road) to be taken, and whilst this is more indirect, and requires road improvements to secondary roads and lanes, it is less prone to congestion. Furthermore, whilst Hall Road has the potential to be impacted by any work associated with the potential future expansion of Stansted, the airport expansion would provide an alternative route. A new link is proposed from Henham Road to Hall Road, bypassing Elsenham Cross junction, which will aim to ensure that the vulnerable Elsenham Cross junction is bypassed and encouraging traffic seeking to access the A120 and M11 to use Hall Road instead of travelling through Elsenham Village and Stansted Mountfitchet. The proponents are also considering other limited road improvements within existing highway boundaries. Finally, it is stated that the impacts on a number of other important junctions are currently being considered as part of traffic impact studies.

**2.7.31** A detailed Transport Assessment has been undertaken. This identifies, and suggests measures to overcome, the following key constraints within the local transport network:

<sup>24</sup> Uttlesford District Council, *per comms*

- the level crossing at Elsenham
- capacity limits on train size at Elsenham station
- poor bus services
- rural pedestrian and cycle network
- Elsenham Cross junction
- Grove Hill signalised junction on approach to Stansted Mountfitchet
- North Hall Road railway underpass
- Hall Road bend at Elsenham Hall
- M11 Junction 8
- Takeley crossroads junction
- environmental constraints in the vicinity of Tye Green/Ugley.

2.7.32 The baseline information highlights that rural lanes are an important landscape and biodiversity feature in Uttlesford, and the Broxton Plateau Landscape Character Area within which the proposed eco-town is located. The Strategic Study prepared by the promoter's agents does acknowledge that the most direct route to access the M11 and A120 from the site will be along a quiet rural road that is constrained by local landscape and nature conservation designations in the vicinity of Tye Green. Further mitigation measures to discourage traffic using this route have been covered in the transport assessment work.

2.7.33 Walking and cycling will be encouraged by providing dedicated and direct routes. Higher density housing will be focused around the rail station and car ownership and use will also be discouraged through car-free areas and car clubs. A range of improvements to cycle and pedestrian routes to nearby centres and employment are proposed, although it is recognised by the promoters that the rural nature of surrounding transport routes is a constraint.

### **Employment and economy**

2.7.34 Elsenham is relatively well placed in terms of being within the catchment of towns with business sites, but will also benefit from being self sufficient on a local level; is well located for people working at Stansted Airport; and will also be a popular place of residence for commuters to London or Cambridge. It is expected that many of those who choose to work away from Elsenham will reach their employment by train as the vast majority of employment will be along the north-south rail corridor, rather than to the east or west. However, this will be dependent on rail capacity. If there is not sufficient rail capacity then there is the potential for high levels of long-distance commuting by car.

2.7.35 The proposal is to provide sufficient jobs within the eco-town for the equivalent of 50 per cent of the employed population. Sectors to be targeted are environmental technologies, research and development, food and drink, and more general services. Encouragement is to be given to home-working by providing centralised services such as conference facilities.

### Spatial issues

2.7.36 The great majority of the site has not been previously developed and therefore comprises green field rather than brownfield land. The farmland is of high quality primarily classified as grade 2, with the southernmost areas being classified as grade 3a.

## 2.8 How can we mitigate/enhance effects?

2.8.1 The **key strengths of the location** from a sustainability viewpoint are:

- limited ecological constraints and the potential to create ecological gain
- proximity to a railway station and the potential for rail to be used to access off-site employment and services
- potential to attract business investment given close proximity to the M11 and Stansted
- improved access to services, facilities and public transport for residents of local villages.

2.8.2 The **key weaknesses of the location** from a sustainability viewpoint are:

- located within a water-stressed area
- a greenfield location comprising versatile agricultural land
- close to the major road network but with capacity constraints on local roads leading to the potential for congestion and pressure to upgrade and widen rural lanes
- unsuitability of local roads for walking or cycling
- the potential to change the setting and character of historic villages.

2.8.3 The sustainability of North East Elsenham as a potential eco-town location is further assessed in Table 2. The table uses a series of 23 indicators, derived from the appraisal criteria, to provide an objective summary of the strengths and weakness of the location from a sustainability viewpoint. On this basis, North East Elsenham has been assessed in accordance with the key at the end of Table 2 as:

**B. Might be suitable for an eco-town subject to meeting specific planning and design objectives**

Table 2: North East Elsenham and eco-town criteria

Issue	Site Specific Issues	Indicators	Comment
Biodiversity, landscape and green infrastructure	Conserve and enhance biodiversity Protect and enhance the landscape Protect and enhance priority habitats and species Increase and enhance green infrastructure	SSSIs within or adjacent to the site	No
		Designated landscapes across or adjacent to the site	No
		Presence of priority habitats/species	Species, but effects can be mitigated
Transport and accessibility	Provide easy access to a higher order centre Provide easy access to a railway station	Proximity to higher order centre (distance)	Bishops Stortford (6.5km) Harlow (14.5)
		Proximity to railway station (distance)	Adjacent
	Discourage long distance commuting	Proximity to existing sources of employment (scale/distance)	Stansted ~3km
		Proximity to Mway/ strategic road network (distance)	~1km
Heritage assets	Protect and enhance archaeological/heritage assets and their settings	Listed buildings/ancient monuments within or adjacent to the site	Yes, several
Flood risk	Avoid development in areas of high flood risk Avoid exacerbating flooding in the vicinity of the site	Area of flood risk 3 within site	No
		Area of flood risk 3 adjacent to the site	Yes
Pollution	Reduce the quantity of contaminated land Minimise	Area of contaminated land	Limited
Social	Meet housing needs	Demand for housing	High
		Demand for social housing	Not high
Energy and climate change	Maximise use of renewable energy	Potential of the site for renewable energy	Average

**Table 2: North East Elsenham and eco-town criteria** (*continued*)

Issue	Site Specific Issues	Indicators	Comment
Spatial efficiency	Utilise existing infrastructure within its capacity Use brownfield land wherever possible Reduce the loss of and damage to the most versatile agricultural land Complement broader planning policies/objectives	Water supply status	Possible, needs more consideration in the Water Cycle Strategy
		STW capacity	Possible, needs more consideration in the Water Cycle Strategy
		Area of previously developed land within the site	No
		Area of grade 1/2 land within the site	Predominantly Grade 2
		Within growth area	Yes
		Will contribute to retaining character of higher order centre	No (but possibly market towns)
		Will facilitate regeneration	No (possibly hinder regeneration of Harlow)
		Will aid adaptation to climate change	Yes

#### 2.8.4 The **key strengths of the development proposal** are:

- the green ring and its role for amenity, nature conservation, sustainable drainage and food production
- proposals for new bus services linking adjacent settlements
- high sustainability standards for new housing
- innovative proposals for community management.

### 2.8.5 Further consideration should be given to:

- the implications of a 5,000 home development in terms of utilities and drainage (the current study only considers implications of a 3,000 home development), as well as on water quality.
- a site specific Flood Risk Assessment to address uncertainty relating to the potential for flood risk as a result of increased surface water run-off
- ensuring the masterplan reflects ecological/landscape constraints and opportunities
- the capacity of the local road network to absorb increased travel, including under the possible future scenario of expansion at Stansted Airport.
- innovative proposals for waste minimisation, recycling and waste management
- more developed proposals for energy conservation and renewable energy generation.

2.8.6 Table 3 compares the development with the draft standards for eco-towns set out in the Progress Report published in July 2008 (which were available to the proponents prior to their final submissions at the end of August).

**Table 3: Sustainability of North East Elsenham as an eco-town location**

SA Issue	Site Specific Issues	Indicators	Comment
Biodiversity and green infrastructure	Conserve and enhance biodiversity	SSSIs within or adjacent to the site	No
	Protect and enhance priority habitats and species	Presence of priority habitats/species	Yes
	Increase and enhance green infrastructure		
Climate change adaptation and flood risk	Avoid development in areas of high flood risk	Area of flood risk 3 within site	No
	Avoid exacerbating flooding in the vicinity of the site	Area of flood risk 3 adjacent to the site	Yes
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes, but average
Landscape and historic environment	Protect and enhance the landscape	Designated landscapes across or adjacent to the site	No
	Protect and enhance heritage assets and their settings	Listed buildings/ ancient monuments within or adjacent to the site	Yes – adjacent

**Table 3: Sustainability of North East Elsenham as an eco-town location (continued)**

SA Issue	Site Specific Issues	Indicators	Comment	
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Water stressed	
		STW capacity	Some capacity, not a major constraint	
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity	Will contribute to retaining character of higher order centre	Yes	
	Complement broader planning policies/ objectives	Will facilitate regeneration	No – possibly hinder regeneration of Harlow	
		Within or adjacent to Air Quality management Area (AQMA)	No	
Decent and affordable homes	Meet housing need	Demand for housing	Yes – high	
		Demand for affordable housing	Yes, but not high	
Transport and accessibility	Provide easy access to a higher order centre	Proximity to higher order centre (distance)	Bishops Stortford c.6.5km (4 miles)	
	Provide easy access to a railway station		Harlow c.14.5km (9 miles)	
	Discourage long distance commuting	Proximity to railway station (distance)	Elsenham rail station c.500m	
	Proximity to area of poor air quality	Proximity to existing sources of employment (scale/ distance)	Stansted c.3km (2 miles)	
		Proximity to motorway/strategic road network (distance)	M11 c.8km (5 miles)	
Spatial issues	Use brownfield land wherever possible	Area of previously developed land within the site	No	
	Reduce the loss of and damage to the most versatile agricultural land	Area of grade 1/2 agricultural land within the site	Predominantly Grade 2	
		Reduce the quantity of contaminated land	Area of contaminated land	No
		Part or all of site within Green Belt		No
		Within growth area		Yes

**Key:**

Positive

Not known

Potential Negative

Negative

## 2.9 How should we monitor sustainability impacts?

- 2.9.1 The sustainability impacts of eco-towns could be monitored partly through regional and local monitoring frameworks. Both the Regional Planning Body and Local Planning Authorities are required to monitor the implementation of their spatial policies – as set out in RSSs and LDFs – and report their findings in an annual monitoring report (AMR). Both RPBs and LPAs could therefore include indicators for monitoring the sustainability performance of eco-towns in their region/district or borough within their AMRs. In light of the appraisal, we consider that indicators should include a particular focus on transport and employment – two of the most challenging issues associated with eco-towns and two of the most important determinants of their overall sustainability. Indicators could include, for example, the proportion of the resident eco-town population who travel to work by public transport, walking and cycling and the number of eco-town residents employed within the town itself.
- 2.9.2 However, it will also be important that the wider ‘lessons learned’ in the planning, development and occupancy of eco-towns are effectively captured and disseminated. This will require gathering a wider range of information including on issues such as funding and partnership working and essentially telling the story of how the town was developed, the obstacles encountered and how these were negotiated. Inspiration could be taken from the Lessons from Cambourne, an evaluation of a new settlement 10 miles west of Cambridge and the insights this provides.<sup>25</sup>

<sup>25</sup> Platt, S. (2007). *Lessons from Cambourne* [online] available at: <http://www.inspire-east.org.uk/FileAccess.aspx?id=744> (accessed 15 August 2008)

## 3 Habitats Regulations Assessment

### 3.1 Introduction

3.1.1 This section sets out the Appropriate Assessment component of the HRA of the shortlisted eco-town location and associated development proposal at **North East Elsenham**. Part I of this report should be referred to for details of the assumptions and principles underlying this assessment.

3.1.2 European sites were scoped into each Appropriate Assessment using the distance criteria set out in the introduction to the Draft PPS (or particularly when considering water resource and quality issues) as a result of the identification of a pathway linking the eco-town with a European site.

3.1.3 The European sites that have been scoped into consideration for this eco-town are:

- Lee Valley SPA and Ramsar site, approximately 24km to the southwest
- Wormley Hoddesdonpark Woods SAC, approximately 30km to the southwest.

3.1.4 There is also a long distance hydraulic connection to the Colne Estuary SPA, Blackwater Estuary SPA and Essex Estuaries SAC, so these European sites must also be considered in the assessment.

### 3.2 Assessment

#### Urbanisation

3.2.1 Given that the North East Elsenham site lies 24km from the nearest European site, it can be said that the settlement will not lead to adverse effects upon European sites as a result of the general 'urbanisation' impacts (eg arson, fly-tipping, car dumping etc) that can be suffered by those sites that lie very close to substantial settlements.

#### Recreational pressure

3.2.2 There are no European sites within the 'typical' distances that people travel to visit countryside, woodland or coastal sites for the day, according to the most recent England Day Visits Survey (see Chapter 4). Therefore there is no reason to assume that the population of North East Elsenham would add materially to recreational pressure on any European sites.

### **Local air quality**

- 3.2.3 As discussed in the Introduction to the SA/HRA of the Programme, this section confines itself to consideration of local air quality effects on European sites that lie within 200m of those local roads (defined for the purposes of this assessment as being those within 2km of the eco-town) that can reasonably be expected to experience a substantial increase in regular vehicle movements as a result of the general movements of the population. Since the nearest European site is 15 miles distant both from the eco-town it can be concluded that there will be no such issues associated with North East Elsenham. The cumulative contribution of the eco-towns to diffuse pollution and local deposition on European sites elsewhere in the region/country are dealt with as a separate pan-regional issue within the Introduction to the SA/HRA of the Programme.

### **Water resources**

- 3.2.4 According to the Environment Agency, the north-east Elsenham area is classed as 'water stressed'. The development will lie within the Three Valleys Water's Northern Resource Zone. The options for increasing future supply in this planning zone to support the 290 dwellings per annum which will be delivered in Braintree District under the East of England Regional Spatial Strategy are dependent upon the transfer of water from the Colchester planning zone using existing or planned trunk main links. They are therefore dependent upon the Colchester re-use scheme whereby a portion of water currently discharged from Colchester Sewage Treatment Works to the tidal River Colne is returned after additional treatment to the inland waters of the River Colne for subsequent abstraction to refill Ardleigh reservoir. The River Colne lies upstream of the Colne Estuary SPA (part of the Essex Estuaries SAC) and it is possible that a shift from Sewerage Treatment Works (STW) discharge to storage in Ardleigh Reservoir could lead to reduced flows of freshwater into the estuary. While there may well be mechanisms available at the project level to reduce this risk, it is not possible at this stage to state that increased water demand as a result of the Elsenham eco-town would not involve levels of abstraction that would inadvertently lead to an adverse effect on the Colne Estuary SPA and Essex Estuaries SAC.

### **Water quality**

- 3.2.5 The nearest STW to which the North East Elsenham development is most likely to be connected discharge to tributaries of the River Blackwater, but, depending on the selected option, there is the potential for the site to ultimately discharge to either the Cam or Stort Catchments.
- 3.2.6 Although the Blackwater does therefore provide an indirect hydraulic connection to the Blackwater Estuary SPA, the dilution factors experienced by any wastewater discharged to the river on its way to the Estuary will be substantial. Moreover, the Environment Agency has commented on a previous occasion that, while nutrient levels within the Blackwater Estuary

are high, this does not result in the smothering macroalgal growth that is having an adverse effect upon other European marine sites (such as The Solent), due to a combination of tidal energy and erosion. As a result, it is considered that the Blackwater Estuary SPA is not vulnerable to adverse effects as a result of an increase in nutrients.

- 3.2.7 Therefore, any increase in the volume of treated sewage effluent discharged into the Blackwater Estuary as a result of the North East Elsenham eco-town is not predicted to have a significant effect upon the qualifying features of the SPA.

### **Coastal squeeze**

- 3.2.8 Not applicable, since the site is 40km from the nearest coastal European site (Blackwater Estuary SPA and Ramsar site).

## **3.3 Conclusion**

- 3.3.1 It is not possible at this stage to say with confidence that the development that may be delivered at North East Elsenham would not lead to adverse effects on European sites (particularly the Colne Estuary) as a result of increased abstraction, when considered in combination with other relevant plans and projects. Additional measures are therefore required within the PPS to provide sufficient direction (in terms of both scope and detail) to enable eco-towns to deliver the detailed site-specific measures necessary to avoid or mitigate an adverse effect. With these recommendations for mitigation and avoidance measures it is essential to bear in mind that these are recommendations for a policy in a PPS. As such they are constrained by the fact that individual policies cannot be tailored to specific eco-towns but must be sufficiently general to cover all the eco-towns and any future developments that will seek to acquire the 'eco-town' label.

## **3.4 How can we mitigate effects?**

### **Water resources**

- 3.4.1 It has not been possible to conclude with confidence that the North East Elsenham eco-town would not lead to adverse effects on European sites as a result of additional demands on water resources, when considered in combination with all other developments across the area promoted by the RSS, and other initiatives without additional measures being included within the Draft PPS. These measures are given below.
- 3.4.2 Avoiding an adverse effect is largely in the hands of the Water Companies (through their resource planning) and the Environment Agency (through their abstraction licencing process). However, there are actions that can be taken by local authorities and central government through the Planning Policy Statement. The water efficiency and drainage policy in the Draft PPS

does include two robust measure to maximise water efficiencies and these will contribute considerably to minimising water consumption and therefore mitigating adverse effects on European sites from the eco-towns:

- *“Eco-towns in areas of serious water stress should aspire to achieve water neutrality, ie achieving development without increasing overall water use across a wider area .... And set out how....*
  - *New homes will be equipped to meet the water consumption requirement of Level 5 of the Code for Sustainable Homes”*

3.4.3 However, it is recommended that the following additions to this Policy are incorporated in order for it to be additionally robust:

- Specific reference should be made to the fact that the eco-town development should only take place once any new water supply infrastructure necessary to service the development while avoiding an adverse effect on European sites is in place. The Draft PPS should also indicate how this need will be determined and delivered through interaction with other authorities (Water Companies, the Environment Agency etc) ie through a Water Cycle Strategy.

#### **The Eco-towns Draft PPS**

3.4.4 The Draft PPS sets the standards for eco-towns at a strategic level; as such, it is important that it incorporates those mitigation and avoidance measures identified as being necessary for all the potential eco-towns. Incorporating these measures within the Draft PPS will help ensure their implementation as the eco-town proposals develop. With this in mind, the recommended mitigation and avoidance measures identified in this section are reproduced within the HRA of the Draft PPS itself (even though the need for the measures arises from the specific eco-town rather than the Draft PPS).

#### **Further HRA/AA**

3.4.5 This HRA/AA has been undertaken at a strategic level and is therefore necessarily broad in its assessment, conclusions and recommendations. It constitutes the first of a series of successive assessments that will be undertaken for each of the eco-towns that are taken forward. As each tier of the planning system is negotiated and the eco-town proposals are further developed, a new and more detailed HRA/AA will be required. For example, where the eco-town is included in a Local Development Framework, the proposal will be subject to HRA/AA and reappraised in the light of more detailed information that may be available and further mitigation or avoidance measures may also be suggested. Planning applications for eco-towns will also need to include a detailed HRA/AA which will demonstrate how the necessary mitigation measures will be delivered on the ground.

# Glossary

## Abbreviation

AA	Appropriate Assessment
AD	Anaerobic Digestion
AMR	Annual Monitoring Report
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
AWCS	Automated Waste Collection Systems
CAMS	Catchment Abstraction Management Strategies
CHP	Combined Heat and Power
CNP	Campaign for National Parks
CPRE	Campaign to Protect Rural England
CRP	Community Reference Point
DEFRA	Department for the Environment, Food and Rural Affairs
DPA	Dwellings Per Annum
DPD	Development Plan Document
EIA	Environmental Impact Assessment
EiP	Examination in Public
EP	English Partnerships
FEH	Flood Estimation Handbook
GWMU	Chalk Groundwater Management Unit
HRA	Habitats Regulations Assessment
IMD	Index of Multiple Deprivation
ISSET	Institute of Sustainable Energy Technology
LCAs	Landscape Character Areas
LDF	Local Development Framework
LNR	Local Nature Reserve
LoWS	Local Wildlife Site
LPA	Local Planning Authority

MBC	Metropolitan Borough Council
MRF	Material Recycling Facility
MUSCO	Multi-Utility Supply Company
NNR	National Nature Reserve
ONS	Office of National Statistics
PDL	Previously Developed Land
PUA	Principal Urban Area
RDF	Refuse Derived Fuel
RPB	Regional Planning Body
RTR	Rapid Transit Route
SA	Sustainability Appraisal
SAC	Special Areas of Conservation
SAPs	Species Action Plans
SEA	Strategic Environmental Assessment
SEEDA	The South East England Development Agency
SFRA	Strategic Flood Risk Assessment
SINCs	Sites of Importance for Nature Conservation
SLA	Special Landscape Area
SNCI	Sites of Nature Conservation Importance
SOAs	Super Output Areas
SPA	Special Protection Areas
SRS	Sub-Regional Strategy
SSSI	Site of Special Scientific Interest
STW	Sewerage Treatment Works
SUDS	Sustainable Drainage Systems
SUE	Sustainable Urban Extension
UKCIP	UK Climate Impacts Programme
WRAP	Waste & Resources Action Programme
WRMU	Water Resource Management Units
WRZ	Water Resource Zone